

WHAT IS CLAIMED IS:

1. A solid type pressure-sensitive adhesive composition obtained by a method comprising adding a tackifier to a rubbery polymer and treating the resulting mixture with an isocyanate crosslinking agent to crosslink the polymer.
2. The solid type pressure-sensitive adhesive composition of claim 1, wherein said rubbery polymer is natural rubber.
3. The solid type pressure-sensitive adhesive composition of claim 2, wherein said natural rubber has a Mooney viscosity ML_{1+4} (100°C) of 20 to 100.
4. The solid type pressure-sensitive adhesive composition of claim 1, wherein said tackifier is a resin compatible with said rubbery polymer.
5. The solid type pressure-sensitive adhesive composition of claim 1, wherein said tackifier is used in an amount of 20 to 200 parts by weight per 100 parts of said rubber polymer.
6. The solid type pressure-sensitive adhesive composition of claim 1, wherein said isocyanate crosslinking agent is a polyisocyanate compound having two or more isocyanate group in the molecule.
7. The solid type pressure-sensitive adhesive composition of claim 1, wherein said isocyanate crosslinking agent is used in an amount of 0.1 to 20 parts by weight per 100 parts by weight of said rubbery polymer.
8. The solid type pressure-sensitive adhesive

composition of claim 1, wherein said treatment is conducted at a temperature of about 80 to 160°C.

9. Pressure-sensitive adhesive sheets which comprise a substrate and formed thereon a layer comprising a solid type pressure-sensitive adhesive composition obtained by a method comprising adding a tackifier to a rubbery polymer and treating the resulting mixture with an isocyanate crosslinking agent to crosslink the polymer.

10. The pressure-sensitive adhesive sheets of claim 9, wherein said layer comprising the pressure-sensitive adhesive composition has a thickness of about 10 to 200 μm .

11. The pressure-sensitive adhesive sheets of claim 9, wherein said rubbery polymer is natural rubber.

12. The pressure-sensitive adhesive sheets of claim 11, wherein said natural rubber has a Mooney viscosity ML_{1+4} (100°C) of 20 to 100.

13. The pressure-sensitive adhesive sheets of claim 9, wherein said tackifier is a resin compatible with said rubbery polymer.

14. The pressure-sensitive adhesive sheets of claim 9, wherein said tackifier is used in an amount of 20 to 200 parts by weight per 100 parts of said rubber polymer.

15. The pressure-sensitive adhesive sheets of claim 9, wherein said isocyanate crosslinking agent is a polyisocyanate compound having two or more isocyanate group in the molecule.

16. The pressure-sensitive adhesive sheets of claim 9, wherein said isocyanate crosslinking agent is used in an amount

of 0.1 to 20 parts by weight per 100 parts by weight of said rubbery polymer.

17. The pressure-sensitive adhesive sheets of claim 9, wherein said treatment is conducted at a temperature of about 80 to 160°C.

18. A method of producing pressure-sensitive adhesive sheets comprising calendering or extrusion coating a solid type pressure-sensitive adhesive composition obtained by a method comprising adding a tackifier to a rubbery polymer and treating the resulting mixture with an isocyanate crosslinking agent to crosslink the polymer, on a substrate.